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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,613	11/03/2003	Ho Sook Lee	2013P122	6493
8791 7590 09/13/2007 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER ABELSON, RONALD B	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 09/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/700,613

**Applicant(s)**

LEE ET AL.

**Examiner**

Ronald Abelson

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-6, 13 and 15 is/are rejected.
- 7) ☒ Claim(s) 1, 7-12, 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7, 8, 10, 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 7 and 8, a first through fourth transmission message have not been claimed.

Regarding claim 10, a first and second transmission message have not been claimed.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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4. Claims 1, 9, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art 'AAPA' in view of Ramamurthy (20030227926) and Wang (US 6,783,367).

Regarding claims 1 and 16, AAPA teaches generating transmission permission messages using a bandwidth allocation mode and determining a transmission time duration of upstream data corresponding to the transmission permission messages (dynamic bandwidth allocation mode, request messages, pg. 2 lines 12-13).

AAPA teaches determining a transmission start time of upstream data and outputting the transmission permission messages (pg. 2 lines 19-21).

AAPA is silent on queuing the transmission permission messages according to types of the transmission permission messages; determining priorities of the transmission permission messages based on the types of the transmission permission messages.

Ramamurthy teaches queuing the transmission permission messages according to types of the transmission permission

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messages; determining priorities of the transmission permission messages based on the types of the transmission permission messages (fig. 3 box 306, 310, [0076]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by queuing and determining transmission permission messages, as shown by Ramamurthy. This modification can be performed in software. This modification would benefit the system by transmitting permission messages according to their priority.

The combination is silent on determining priorities of the transmission permission messages based on registration information of an optical network unit (ONU) that receives the transmission permission messages.

Wang teaches determining priorities based on registration information of an optical network unit (ONU) / user, that receives the transmission permission messages (col. 9 lines 17-19).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by determining priorities of the transmission permission messages based on registration information of an optical network unit (ONU) that receives the transmission permission messages, as

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suggested by Wang. This modification can be performed in software. This modification would benefit the system by providing a method for assigning priority to each ONU.

5. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Ramamurthy (US 2003/0227926) and further view of Yuang (US 2004/0202121).

Regarding claim 12, AAPA teaches a bandwidth allocation unit to allocate upstream data transmission bandwidth to each optical network unit 'ONU' (pg. 2 lines 10 - 18).

AAPA is silent on a bandwidth allocation unit, which generates transmission permission messages to allocate upstream data transmission bandwidth; a queuing unit, which queues the transmission permission messages according to types of the transmission permission messages; and a scheduler, which designates the predetermined priority, reads the transmission permission messages from queues according to a predetermined priority, determines a transmission start time of upstream data, and outputs the transmission permission messages.

Ramamurthy teaches a bandwidth allocation unit, which generates transmission permission messages to allocate upstream data transmission bandwidth (fig. 3 box 306, [0076]); a queuing

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unit, which queues the transmission permission messages according to types of the transmission permission messages (fig. 3 box 310, [0076]); and a scheduler (fig. 3 boxes 306, 312, [0077]), which designates the predetermined priority (fig. 3 box 306, generates request and classifies request, [0076]), reads the transmission permission messages from queues according to a predetermined priority (fig. 3 box 312, [0077]), determines a transmission start time of upstream data, and outputs the transmission permission messages (fig. 3 box 312, request scheduler selects requests from queues 310 and passes them to request message generator 314, [0077]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by performing bandwidth allocation according to the teachings of Ramamurthy. This modification can be performed in software. This modification would benefit the system by performing bandwidth allocation according to permission message priority.

The combination is silent on a control unit, which selectively designates static bandwidth allocation and dynamic bandwidth allocation.

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Yuang teaches a control unit, which selectively designates static bandwidth allocation and dynamic bandwidth allocation (fig. 2 box 13, [0016]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by incorporating the intelligent bandwidth allocator of Yuang within the apparatus of the combination, as suggested by Yuang. This modification can be performed in software. This modification would benefit the system by providing for simultaneous static and dynamic bandwidth allocation.

In determining the appropriate standard for obviousness the Supreme Court in *KSR International Co. v. Teleflex Inc. et al*, 550 U.S. \_\_\_\_ (2007) reaffirmed the standard of review under *Graham v. Deere* 383 U.S. 1, 148 USPQ 459 (1966). It held that the standard of teaching, suggestion, or motivation (TSM) was appropriate. But it also held that obviousness is not strictly limited to the TSM requirements. One must consider the totality of the art from the point of view of a skilled artisan. Thus, the fact that a reference teaches one way of doing something does not preclude a finding of obviousness when a items are combined for a different function. The Court specifically



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stated that "if a person of ordinary skill in the art can implement a predictable variation, Section 103 likely bars its patentability." While the court stated that mere conclusory statements is an insufficient reason to combine known elements, it stated that "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take into account of the inferences and creative steps that a person of ordinary skill in the art would employ." This evaluation includes the use of common sense and whether the combination of familiar elements according to known methods yields predictable results.

Claims 9 and 14 are rejected under KSR since they merely recite what is already well known in the art.

#### ***Allowable Subject Matter***

6. Claims 2-6, 13, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Response to Arguments***

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7439. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ronald Abelson  
Examiner  
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